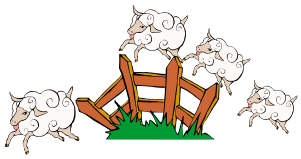
Facts about sleep



The Nature of Sleep

Sleep is such an important part of our lives, yet many of us don't pay much attention to it. It is usually not until we have problems with sleep that we notice it and start to try to understand the nature of sleep. As well as humans, other mammals, reptiles and birds all sleep, while fish, amphibians and insects do not (although they may rest). Some animals sleep in many short bursts, while others, like humans, prefer to sleep in one long block.

We all know what sleep looks like - we recognise a sleeping person because they have their eyes closed, will usually be lying down, breathing in a slow rhythm, with relaxed muscles and generally keeping still, although they may rearrange their bodies every so often. Being asleep is being unconscious to most things happening around you, but is different from a coma or passing out because sleeping people can be woken up, by loud noises or bright lights or touch.

Stages of Sleep

Research tells us that there are two types of sleep:

- **REM rapid-eye-movement sleep**: this type of sleep occurs for about 25% of the night, and is characterised by electrical activation of the brain, very relaxed muscles and body becoming immobile, and rapid eye movements as the eyes dart back and forth under closed eyelids. REM sleep provides energy to the brain and body and supports daytime performance. Dreams often occur during REM sleep, although they can occur at any stage.
- **NREM non-rapid-eye-movement sleep**: this type of sleep occurs during the other 75% of the time, and can be further broken down into 4 stages:
  - **Stage 1**: this stage is light sleep, between being awake and falling asleep
  - **Stage 2**: this stage is the onset of sleep, when the person begins to become disengaged from their surroundings. Body temperature drops and breathing and heart rate become regular.
  - **Stages 3 & 4**: These stages are the deepest and most restorative sleep, known as 'delta sleep' - Stage 3 is a transition into Stage 4, or 'true delta.' During these stages, blood pressure drops, breathing becomes slower, muscles are relaxed and receiving more blood supply, tissue growth and repair occurs, and hormones are released (including growth hormone, which is why growing teenagers need to sleep more).

Role and Function of Sleep

Sleep is essential to humans, just like air, water and food. When necessary, people can cope without sleep for periods of time, but the longer we are awake the stronger the urge to sleep becomes.

The exact role and function of sleep has been a topic of debate for researchers, but most agree that sleep serves a restorative purpose, both psychologically and physiologically. It is thought that delta sleep (stages 3 & 4) is most involved with restoring the body and physical energy, while REM sleep is most important for restoring mental function such as memory and concentration.

Sleep is important for general physical health, restoring energy, repairing injuries or illness, growth, psychological well-being and mood, concentration, memory, work performance, and getting along with others.

Effects of Lack of Sleep

People vary in terms of how much sleep they need - while the average sleep duration for adults is 7-8.5 hours per night, some people function well with 4-5 hours and others require 9-10 hours. Whatever your individual needs, lack of sleep or poor sleep quality can have effects including:

- Poor attention, concentration and memory
- Irritability and other mood disturbances
- Impaired judgement and reaction time
- Poor physical coordination (dangerous for driving)

The seriousness of these effects depends on how bad the sleep deprivation is (e.g. less sleep vs. no sleep; one night's poor sleep vs. chronic problems) and the tasks and responsibilities of the day. If you have ongoing problems with sleep, it is important to seek help.

How Well do Good Sleepers Sleep?

Good sleepers usually take less than 30 minutes to fall asleep at the beginning of the night and will wake up once or twice during the night. In other words, it is unrealistic to expect to fall asleep immediately on getting into bed or to never wake up at all during the night. Even the best sleepers in the world don't achieve this! Also, *everybody,* even the best sleepers, will have a night now and then when it takes them a long time to get to sleep. This is often triggered by a stressful event and will usually pass after a night or two. Similarly, everybody will have a night now and then when they find it difficult to get back to sleep after waking in the middle of the night.

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